

VIA FACSIMILE (703) 872-9306

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

Claims 1-13 (Withdrawn)

14. (Currently amended) An automated rotary microtome blade changing apparatus, comprising
- (a) an upper stage adapted to releasably engage a supply and a waste cartridge, said upper stage including a loading segment adapted to engage and move blades contained within said supply cartridge into a cutting position;
 - (b) clamping means for releasably holding said blades in place for cutting operations, comprising
 - a fixed support plate adapted to support a first side of said blade, said fixed support plate in intimate contact with the upper stage body,
 - a clamping plate having a clamping surface capable of engaging a second side of said blade when the clamping plate is pivoted into the clamping position,
 - a pivot means for supporting a midpoint region of said clamping plate, said pivot means itself being integral to or supported by said upper stage,
 - a clamping cam that engages said clamping plate, said clamping cam being mounted on a drive shaft and providing motion orthogonal to said drive shaft axis thereby pivoting the clamping plate about said pivot point;
 - (c) power means for driving the movement of blades and clamping mechanisms, comprising
 - an electric motor mounted proximate to said drive shaft,
 - a motor pulley mounted between said drive shaft and said electric motor and interconnected therebetween so that power from said motor is transferred to said drive shaft; and
 - ~~a drive shaft for turning said clamping and said loading cams; and~~

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(d) electronic control means for integrating all of the functions of the apparatus,
comprising
a microcontroller in electrical communication with a switch on a keypad, a power
source, a motor, and safety interlocks.

15. (Currently amended) An automated rotary microtome blade changing apparatus, comprising

(e)(a) an upper stage adapted to releasably engage a supply and a waste cartridge, said
upper stage including a reverser shuttle adapted to engage and move blades contained within
said supply cartridge into a cutting position;

(f)(b) clamping means for releasably holding said blades in place for cutting operations,
comprising a fixed support plate adapted to support a first side of said blade, said fixed
support plate in intimate contact with the upper stage body, a clamping plate having a
clamping surface capable of engaging a second side of said blade when the clamping plate is
pivoted into the clamping position, a pivot means for supporting a midpoint region of said
clamping plate, said pivot means itself being integral to or supported by said upper stage, a
clamping cam that engages said clamping plate, said clamping cam being mounted on a drive
shaft and providing motion orthogonal to said drive shaft axis thereby pivoting the said
clamping plate about said pivot point;

(g)(c) power means for driving the movement of blades and clamping mechanisms,
comprising an electric motor ~~adapted~~ adapted to engage said drive shaft, a drive gear
mounted on said drive shaft, said drive gear transmitting power to said clamping means and
said reverser shuttle; and

(h)(d) electronic control means for integrating all of the functions of the apparatus,
comprising a microcontroller in electrical communication with a switch on a keypad, a power
source, a said motor, and safety interlocks.